rots of the Solanaceae and on the tobacco wilts with their confusion of diseases described from different parts of the world and attributed to various organisms. It is the great merit of the author to have contributed so largely to the field of plant bacteriology. It is an almost equal merit to have clearly pointed out the lines for future progress.—H. HASSELBRING.

MINOR NOTICES

A popular guide to mosses.—Mrs. DUNHAM[4] has undertaken to present the mosses of the northeastern states in a non-technical way, so that the amateur may recognize at least their genera without using even a hand lens. The result is a very attractive little book, whose simple language and marginal illustrations should accomplish the purpose announced. If it succeeds, it will open up to the general student a group of plants present in every flora, and usually regarded as too difficult for even a speaking acquaintance.—J. M. C.

Plant diseases.—A second edition of MASSEE'S[5] very useful manual has just appeared, 5 years after the publication of the first edition. It differs from the former edition only in containing a supplement of 16 pages, giving statements concerning 20 diseases which are not included in the body of the text, or concerning which additional information is given.—J. M. C.

NOTES FOR STUDENTS

Evolution of species in Ceylon.—WILLIS[6] has followed his recent paper on the endemic flora of Ceylon[7] by developing still further his argument against natural selection as an explanation of the geographical distribution of species. His argument is based mainly upon statistics derived from TRIMEN'S *Flora of Ceylon*, in which the species are divided into 6 classes, ranging from "very common" to "very rare." He observes that in Ceylon the endemic species are the rarest, according to the foregoing classification, while species which are widespread outside of Ceylon are commonest there also. This not only appears from a consideration of the flora as a whole, but in every family the endemic species are the rarest. It also appears that within every family the groups of species into the rarity classes are remarkably alike. WILLIS regards these phenomena as the result of some natural cause working with practically even pressure throughout the whole plant kingdom, a cause entirely unlike natural selection, which is essentially differentiating in its results. This

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[4] DUNHAM, ELIZABETH MARIE, How to know the mosses; a popular guide to the mosses of the northeastern United States. 8vo. pp. xxv+287. Boston: Houghton Mifflin Co. 1916. $1.25.

[5] MASSEE, GEORGE, Diseases of cultivated plants and trees. 8vo. pp. xii+602. *figs. 173*. New York: Macmillan. 1915.

[6] WILLIS, J. C., The evolution of species in Ceylon, with reference to the dying out of species. Ann. Botany **30**:1–23. 1916.

[7] BOT. GAZ. **61**:82. 1916.